



DEATH FROM RUPTURE OF THE UTERUS.

INVERSION OF THE UTERUS, AND EXPULSION OF THE
CHILD BY GASEOUS PUTREFACTION.

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THE notes of the following singular case have been furnished to me by Mr. Edward Bedford and Mr. Alfred Roberts of Sydney, formerly pupils at this hospital. The inspection of the body was made by Mr. Bedford, and the report drawn up by him :

On the 3rd June, 1864, by direction of the coroner, Dr. Shaw and I made a post-mortem examination of the body of a woman aged 37 years, who had died on the 27th May previously, thirty-four miles from Sydney. She was at the time in labour of her seventh child, but she died undelivered. Her previous labours had been good. Two medical gentlemen had seen her during life, and after her death reports arose of want of care on the part of the first medical attendant, who was also the coroner for the district; the Attorney-General, therefore, directed the body to be exhumed, and an inquest to be held in Sydney, where the woman had been buried.

From the evidence it appeared that on the 26th May she was attacked with shivering and a feeling of weakness; she then became warm. She sent for a medical man who lived close to her house. She described her symptoms to him, and stated that she was near her time, and though she had pain in her head and chest, she had no labour pains. She was in a small room with a fire, and a quantity of blankets were over her. She was directed to have the fire put out, the blankets

removed, and as the bowels were not opened, a dose of castor-oil was ordered. Some time after, as this did not act, an enema was directed to be given. In a few hours she had another shivering fit, and her medical attendant visited her again. The woman then complained of thirst and flatulence, and still said she had no labour pains. The nurse said the waters had been discharged; medicine was ordered to relieve the flatulence, cooling applications were directed to be applied to the head, and the medical attendant left the house. As his residence was near, and a midwife was in attendance, he did not feel it necessary to remain until pains set in. The medical man had not left many minutes before a violent pain came on, not only severe, but long. The nurse felt the head of the child very low down, and observed that it receded a good deal when the patient drew her breath, and after the pain had subsided. The woman suddenly became very weak, delirious, and died in rather more than half an hour from the time of this pain coming on. The nurse then sent for another medical gentleman, who, on his arrival, found the patient in a dying condition, the head of the child low down, and there were no pains. He gave gin and ergot, but these were not swallowed; he sent for his instruments, but before they arrived the woman had died.

An inspection of the exhumed body was made about a week after death, and the following appearances were found. The body was well nourished, there was a good deal of decomposition, and from that cause the abdomen was much distended. The dead and decomposed body of a male child, which had arrived at its full time, was lying between the thighs of the deceased; the head was towards the feet of the mother, and the feet underneath the uterus, which was inverted, and with the placenta attached to it was lying also between the thighs. The umbilical cord was not divided. On opening the abdomen a good deal of gas escaped; there were about four pints of blood effused in the cavity of the peritoneum; the hand could be passed between the bladder and rectum into a pouch which extended between the thighs. Towards the rectum there was found an opening. On replacing the uterus, which was not contracted, there was observed a rent through it and the peritoncum. The rupture of the uterus was at its posterior

part a little above the cervix; it was transverse and about six inches long.

The heart was flabby with much fat, the liver and right portion of the diaphragm were very soft. There was a small quantity of extravasated blood in the muscular structure. The left lung had at its apex tubercular deposit, and between the pleura and spine on that side, there was a small quantity of coagulated blood.

From these appearances, and from the general history of the case, the opinion given at the inquest was that death was caused by a rupture of the uterus. The loss of blood as a result of this rupture was so sudden and copious that the first symptoms gave no clue to the coming event; that the rupture and consequent hæmorrhage were necessarily fatal; and that no blame attached to the first medical attendant.

There are many points of interest in this case. 1. The rupture took place after one prolonged pain, without any previous symptoms that would lead to a suspicion of what was about to happen. 2. Though the rupture was large, yet the body of the child did not escape into the abdomen, no doubt owing to the fact that the child had been brought down very low by the prolonged pain which nearly passed it into the world. Rupture of the uterus then took place, and the child was too low down to recede to its original position.

The child was not expelled from the mother by any post-mortem contraction of the uterus, for that organ was not found contracted. The post-mortem passage of the child and inversion of the uterus, were, I consider, the result of the pressure of the gas arising from decomposition in the abdomen. In many cases, perhaps most, this organ contracts after rupture, as in rupture of the intestines the mucous membrane is generally everted; but in some severe lacerations from external violence I have seen the torn parts lie without any muscular action taking place in them, and although the person lived many hours, yet the contents of the bowels had not passed through the lacerated parts. In this case the violent action of the uterus may have produced a similar condition.

If the uterus was in this inactive state after the rupture and after systemic death, it would be lying like a piece of wash-

leather applied closely to the body of the child in its cavity ; the gas from decomposition collecting in the abdomen, which was largely distended at the time of inspection, would gradually press upon the fundus and its contents. Under these circumstances the body of the child would be pushed forwards, followed by the closely attached uterus, which would thus become inverted. This would account for the position in which they were discovered. Had the child been born by the contraction of the uterus, this would have been observed before the body of the woman had been placed in the coffin. Whether the reasons here given are considered correct or not, the case is, so far as I am aware, quite novel, for I have nowhere seen recorded an instance of inversion of the uterus as a result of post-mortem changes.

[The effects of putrefaction on the development of gases in the cavities of the body, have been described by Orfila and other medico-legal writers. The protrusion of the eyes, the swelling of the tongue, the escape of mucous fluids by the mouth and nostrils,—or of blood from divided vessels leading to what has been called post-mortem hæmorrhage,—are conditions which have been noticed and recorded by those who have watched the stages of decomposition. The production of gases from the decomposition of the fluids, takes place in all the cavities of the body, but most rapidly and abundantly in the cavity of the peritoneum. Orfila states that he has noticed this particularly in those cases where persons have died suddenly from violent causes, death having been preceded by severe pain or strong muscular exertion. In such cases the body may become emphysematous in two or three hours, and be rendered so buoyant as to float readily upon water. (*‘Médecine Légale,’* i, 656.) Some dead bodies pass into gaseous putrefaction with great rapidity. The Inspection books of this hospital will furnish instances of this kind.

A man, æt. 39, was admitted into Guy's Hospital in October, 1849. He was fat, of pale complexion and of intemperate habits. The muscles were flabby. He died suddenly after a few days, without suffering from any symptoms indicative of danger. His death took place at 10.30 p.m. The body remained in the ward until 8 a.m. the following morning,

the air having a temperature of from 60° to 65° . The conditions as to cooling and rigidity were not observed during the night, but when removed at the hour mentioned, decomposition had already commenced. The skin on the left side was raised in large bladders, containing a bloody liquid. At 2.30 p.m., *i.e.* sixteen hours after death, the entire skin was more or less of a blue or purple colour; the eyes protruded from the sockets, and the nostrils were filled with a bloody froth, from which minute bubbles of gas continually issued. The abdomen and scrotum were greatly distended with gas. The groins were much putrefied, and were covered with minute blood-vesicles. I saw the body seventeen hours after death. The skin of the neck and face had then a bloated and tense appearance, from the collection of gas beneath. Blue, green, and livid-red discolorations were seen more or less over the whole surface, with bladders or vesicles as in the advanced putrefaction of bodies after some days' exposure in hot weather. The gases which issued in jets from every part of the skin in which a puncture was made, were highly offensive. When a flame was applied to the puncture, the gas burnt suddenly with almost explosive violence. The gas did not discolour slips of paper moistened with acetate of lead or nitrate of silver: hence neither sulphuretted nor phosphuretted hydrogen was present. It burnt like the bright carburetted hydrogen; and I believe that it was this gas, mixed with other gases and vapours derived from putrefaction. When the tense skin of the scrotum was punctured, a jet of carburetted hydrogen escaped, which burnt steadily, with a pale yellowish flame, for above a minute. The state of the body precluded a post-mortem examination, which was considered unnecessary.

I have published a full account of this case in the 'London Medical Gazette' for 1850, vol. 45, page 17. One somewhat similar was reported by Dr. Wilks in the 'Guy's Hospital Reports' for October, 1863, p. 181, and he has since communicated to me the following case:

A man, *æ*t. 50, died in Guy's Hospital, from an accident in December, 1860. He lost much venous blood, and, without showing any sign of rallying from the accident, he sank on the fourth day after his admission. For a few hours before death he suffered from great difficulty of breathing, and his pulse

was not perceptible. The man died at 6 p.m., and in an hour or two his body was carried to the dead-house. The weather was frosty, and it was a hard frost during the night that the body lay in the dead-house. On the following day (only twenty hours after death) putrefaction had advanced to such a degree, that the deceased could scarcely be recognised. The skin was throughout distended by the gases of putrefaction. All the viscera were decomposed, the liver contained putrescent gases, and even the coats of the gall-bladder were distended with them. This was an instance of rapid death, probably from blood-poisoning.

In Mr. Bedford's case we get rid of any difficulty about the sufficiency of time after the death of the woman for the production of a large quantity of gas in the cavity of the abdomen. The question, therefore, simply arises whether the presence of the accumulated gas can suffice for the production of the phenomena described. The abdomen was much distended at the time of inspection, hence it is obvious that there was even then no free escape for the gases thus accumulated.

Medico-legal writers have described cases of delivery where the child has been expelled after the death of a pregnant woman, and in some few instances where this expulsion has taken place after putrefaction had commenced, and as a result of the process. One of the best authenticated of these occurred to Dr. Richter, of Weissenfels; it will be found reported in Casper's '*Vierteljahrschrift für gerichtl. und öffentl. Medicin*,' vol. xix, p. 163. Berlin, 1861. A woman, æt. 45, had been married seven years, and during this time had aborted twice in the second, and once in the third month of gestation. In August, 1861, she returned home from field-work on a Monday evening, apparently well. About 8 p.m., she was seized with severe spasmodic pains in the region of the heart; these came on in fits every five or ten minutes. A nurse who attended her in her pregnant state, found on examination that the mouth of the uterus was quite closed, the neck only a quarter of an inch long, and the head of the child lying forwards. There had been no discharge of blood or of serous fluid, nor any appearance to indicate approaching labour. An enema was administered, and some time after this, another examination was made. There

had not been the least change, and the commencement of parturition appeared as far off as ever. About midnight, after a remission of two hours, the woman was suddenly attacked with so severe a paroxysm of pain that she attempted to jump out of bed. She was forcibly held back, and she then lay still and quite unconscious until 5 a.m. on Tuesday morning, when, after breathing slowly and stertorously, she died. A medical man who had been sent for, only reached the house after her death.

The dead body was washed and laid out in the usual way. There was no appearance about the genital organs to attract particular attention. The body was moved in the evening into another room, and there it was frequently seen by the nurse and other people of the house. Putrefaction set in somewhat quickly; and as there appeared to be some watery discharge about the genitals, the thighs of the corpse were slightly separated by the nurse. This examination was made on Thursday evening, about sixty hours after death. On the following morning, the fourth day after death, when arrangements were made for placing the dead body in a coffin, there was found lying between the thighs of the corpse, the dead body of a child in a partially putrefied state. It was well developed, and at about the eighth month of gestation; with it were lying the umbilical cord and placenta. Some water had flowed from the outlet, the body was livid, and the abdomen, although smaller in size, was still distended with gas. Dr. Richter truly observes that this case is remarkable, inasmuch as the contents of the uterus had been expelled by the gases of putrefaction, although labour had not previously commenced. Still, the facts were of that character that nothing but physical forces could have been concerned in the expulsion of the dead body of the child.

In many points this case resembles that described by Mr. Bedford, but in his case there was the additional fact that the uterus itself was lacerated and inverted, or turned inside out. Such a state of parts might appear to indicate violent manipulation, and expose a practitioner, as on that occasion, to a charge of malapraxis. It was clear, however, from the testimony of eye-witnesses, that the extrusion of the body must have occurred after the deceased woman had been

placed in the coffin; and in Dr. Richter's case it is equally evident that the extrusion occurred on the fourth day after death and before burial, under circumstances which could admit of no mistake.

[It is obvious that a medical practitioner may be placed in great peril by an occurrence of this nature, unless the facts are known and can be deposed to by eye-witnesses. A woman might die undelivered during the attendance of a medical man. Her condition might be such as to justify the employment of instruments brought for the purpose, but not used, either from her sinking state or her sudden death. Under these circumstances, the discovery after death of a dead child between the legs of the female, with the uterus lacerated and inverted, the placenta and umbilical cord lying near, and a large effusion of blood in the abdomen, are facts which at first sight do not appear to be reconcilable with the effects of spontaneous changes in the dead body. There are probably some medical practitioners who, from not having before heard of such cases, would not hesitate to deny the possibility of their occurrence. It is to them that cases of this description convey a serious warning. Ocular evidence of the condition of the deceased woman may not be forthcoming when it is required to clear up an apparent mystery. It is, therefore, desirable to proceed with the caution shown by Mr. Bedford in the case which is the subject of this paper, and to take into consideration the remarkable effects occasionally arising from accidental circumstances. On this occasion the coroner of the district, himself a medical man, was the individual who was supposed to have maltreated this female. If the investigation had fallen into the hands of an ignorant person, he would have had some difficulty in placing himself right with the public. The utility of recording such cases is seen in the fact that they aid the development of truth in charges which involve the reputation of members of the profession. They also supply, for the purposes of medical evidence, and for the defence of medical opinions, facts which may never have come before a practitioner in his professional career.]